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ABSTRACT

A study identified similarities and differences in the findings leading up to the enactment of two significant pieces of education legislation: the Smith-Hughes Act of 1917 and the School-to-Work Opportunities Act of 1994 (STWOA). Historical and current demographic, employment, and education data were reviewed. Significant similarities in the findings were as follows: (1) existing educational systems were not adequately preparing youth for the workplace; (2) technological changes in the workplace dictated the need for modifications and enhancement to secondary educational systems; (3) there was no relationship between what was taught in schools and what was needed in the workplace; and (4) the U.S. economy would continue to grow and remain competitive only if immediate attention were directed at changing public educational systems. The significant difference between the variables leading up to the acts was the structure of secondary schools at the time of enactment. If the STWOA is to make a difference in how youth are prepared for the workplace, three issues must be resolved: develop national strategies for changing the cultural philosophy that a college education is required for success in the workplace; design student performance outcomes to encourage integration of academic and occupational strategies within each content area taught; and create systems that ensure that all children have access to equal educational opportunities, regardless of gender, disabilities, economic, and ethnic backgrounds. (Contains 20 references.) (YLB)

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A Comparative Analysis of Findings: Smith-Hughes Act of 1917 and the School-to-Work Opportunities Act of 1994

ED 389 852

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A Comparative Analysis of Findings: Smith-Hughes Act of 1917 and the School-to-Work Opportunities Act of 1994

Abstract

This study sought to identify the similarities and differences in the findings leading up to the enactment of two significant pieces of education legislation: The Smith Hughes Act of 1917 and the School-to-Work Opportunities Act of 1994. Historical and current demographic, employment and education data was reviewed. It was concluded that there are significant similarities in the findings.

Specific issues, related to education, need to be resolved if the School-to-Work Opportunities Act of 1994 is to make a difference in how youth are prepared for the workplace. If these are not addressed, there is nothing that will stop America for remaining in the same place for another 100 years.

Background

The School-to-Work Opportunities Act of 1994 (STWO) has been touted as one of the major initiatives included on the school reform agenda in the late 20th century. The legislation expects to provide high school students with skills and knowledge needed to begin successful careers for the 21st century. On the surface, the STWO gives the appearance of satisfying many education purpose and quality issues raised by parents and prospective employers. These concerns focus on increasing the effectiveness of public schools in preparing students, both college bound and general education, for the world of work.

In the early 1900's, the American public voiced similar concerns regarding whether schools were adequately providing students with the skills necessary to be competent workers and productive citizens. In 1914, the Commission on National Aid to Vocational Education (CNAVE) conducted an intensive investigation into the national need for vocational education. The Commission's findings were used to formulate the Smith-Hughes Act of 1917.

This legislation was written to provide the States with financial resources and guidelines to support the development of Vocational Education programs. These programs would prepare students for various occupations and increase their awareness of and their ability to assume the responsibilities of citizenship.

The School-to-Work Opportunities Act of 1994 articulates ten findings that are to be addressed through the establishment of School-to-Work systems in American schools. However, a review of the Commission's report written in 1914 reveals that many of these same concerns should have been resolved through the formation of federally funded secondary vocational programs outlined in the Smith-Hughes Act of 1917.

A preliminary review of the two pieces of federal legislation indicated that their supporting findings appear to be similar. Both attempt to provide solutions to similar problems related to how schools prepare students for work. The Acts provide substantial financial resources to the States for the implementation of specific vocational programs to address industry's need for a highly skilled workforce. Both are significant pieces of federal legislation for vocational education in America. They are designed to provide the cornerstones upon which other work-related educational programs and systems are supported. Or is it possible that the specific issues addressed through the Acts differ?

This study compares the findings reported in the School-to-Work Opportunities Act of 1994 with those made by the Commission on National Aid to Vocational Education (CNAVE) in 1914. The study focus is aimed at identifying important similarities or differences. The findings have been grouped into two broad categories: (1) The importance of

preparing youth for the world of work, and (2) The need to reshape public secondary schools to meet that challenge.

Preparing Work-Ready Youth

The perception that schools are ineffective in preparing students for the world of work has not changed since the beginning of the twentieth century. There is and was a shortage of manpower equipped with the entry level skills needed to function effectively in rapidly evolving workplaces. The need for a more educated workforce began to rise just prior to the industrial revolution. At the turn of the century, evolving manufacturing industries created a demand for more skilled workers. During the latter part of the century, technological advances have spurned the need for a differently skilled worker. As a result, public attention and awareness focuses on changing the public education system to supply business with skilled labor.

The School to Work Opportunities Act of 1994 (STWO) highlights conditions that influence the productivity and efficiency of youth entering the workplace, during the next century. Specifically, Findings One, Three, and Four describe the conditions impeding youth success in the world of work.

Entry Level Skill Deficiencies

Finding One of the School-to-Work Opportunities Act of 1994 indicates that students are not entering the workforce with the basic skills

needed to be immediately productive in the world of work. The finding reads:

> 3/4 of high school students enter the workforce without baccalaureate degrees, and many do not possess the academic and entry-level occupational skills necessary to succeed in the changing US workplace. (20 USC 6101)

Today, it is perceived that schools are not producing future workers with the fundamental skills required to process new concepts rapidly enough to be effective in productive business organizations. Ensuring that youth are prepared to enter the American workforce with the entry level skills expected by employers is critical to the continued dominance of the United States in a global marketplace.

A study conducted by the National Research Council (1989) identified that over 75 percent of all jobs require proficiency in simple algebra and geometry, either as a prerequisite for training programs or as part of a licensure examination. The American Management Association (1994) reports that 90 percent of the firms, that test job-seekers for basic skills abilities, do not hire skills-deficient applicants. The need for employees to possess proficient basic skills has been a concern since the beginning of the century.

The road to providing educational opportunities to all children had begun to unfold, at the turn of the 20th century. However, it did not move

rapidly enough or follow the necessary path for providing enough skilled manpower for the changing workforce of the early 20th century. The Commission on National Aid to Vocational Education (CNAVE) found that public school instructional programs were not capable of filling the ever-increasing labor needs. The CNAVE report (1914) indicates that:

> Assuming that all children have a minimum school training equivalent to the eight grades of the elementary school, we must acknowledge that the schools now furnish this minimum to less than half the children who enter them. The rest leave school with inadequate general education and with no special training to fit them for work. (p. 19)

The CNAVE also concluded that students with only a primary education, first through eighth grades, were not prepared to enter skilled occupations or apprenticeship programs. This, they determined, prevented students from earning better wages or increasing occupational opportunities. It should also be noted, that in 1914, there were no educational programs designed specifically for adults to acquire higher level academic skills.

Youth Employment and Career Advancement Opportunities

The inference made in Finding One of the School-to-Work Opportunities Act of 1994 (STWO), that youth do not have the basic skills necessary to be successful in the workplace, provides support for Finding

Three which indicates that "Unemployment among youth in the US is intolerably high, and earnings of high school graduates have been falling relative to earnings of individuals with more education". (20 USC 6101)

There appears to be two concerns being addressed through Finding Three of the School-to-Work legislation. The first issue centers around the premise that youth unemployment is out of line with projections or expectations. The second concludes that high school graduates are not making comparable wages in relation to those with more advanced certificates or degrees.

The review of Finding Three will begin with a closer look at youth unemployment. For purposes of this discussion, the age range for 'youth' is 16 to 24 years of age. The Bureau of Labor Statistics (BLS, March, 1994) reported that employees in their youth are most likely to live in poverty. The poverty threshold calculations (BLS, 1994) used in 1992 for a family of four was $14,334; for a family of nine persons or more, the threshold was $28,745 and for an unrelated individual age 65 and over, it was $6,729.

Table 1 indicates the number of youth below the poverty level as a percentage of the total number of persons in the labor force, those who were employed full-time or looked for full-time work, for 27 weeks or more during 1992.

Table 1

Youth Poverty Rates[1]

Group	Percent	Men	Women
All 16- to 19-year-olds	12.1%	10.9%	13.4%
White	11.2	10.4	12.0
Black	19.8	14.6	25.8
Hispanic	23.8	25.0	22.1
All 20- to 24-year-olds	10.9	10.4	11.4
White	10.2	10.3	10.0
Black	16.3	11.5	21.4
Hispanic	18.5	21.1	14.4

Source: Source: Bureau of Labor Statistics. (BLS, March 1994).
[1] percentage of the total labor force.

Table 1 supports that employees in their youth are most likely to live in poverty. As indicated, twelve percent of youth 16-to 19-years-old worked full-time or were looking for full-time employment. Nearly eleven percent of 20- to 24-year-olds fell into the poverty category. It was estimated (Sharraden, 1987; Sum, 1987) that one-fifth of the nation's teenagers are unemployed and that employment opportunities for teenagers are declining faster than the youth population.

The second part of Finding Three of the School-to-Work Opportunities Act of 1994 indicates that earnings of high school graduates

have been falling relative to earnings of individuals with more education. The BLS found that "One of the most important personal characteristics associated with a worker's proverty status is education". (pg. 2)

It is reported, (NCES, 1994), that college enrollment rates experienced a major increase from 1983 to 1993. In 1983, 50 percent of 18- and 19-year-olds were enrolling in post-secondary academic and/or vocational programs. That increased to over 61 percent in 1993. There was also an increase in the 20-to 24-year-old age range. Slightly more that 15 percent of these college-age students were enrolled in post-secondary education institutions, as well.

It should be noted that the Bureau of Labor Statistics (BLS, March, 1994) found that, regardless of the level of education, the proverty rate for African Americans was much higher than that of whites. Eleven percent of African American men with a high school diploma live at poverty levels compared to only six percent of white men. There is a difference of slightly more than twelve percent between African American and white women living at or below poverty levels with high school diplomas. These specific facts are not highlighted nor specifically addressed in the findings outlined in the School-to-Work legislation.

During the early 1900's, youth unemployment was not a specific concern. Almost everyone over the age of 20 worked during the period 1890-1930. For young peopled aged 20 to 24, the participation rate

averaged 91 percent during the time period 1890-1930. The rate of participation in the workforce by youth 16- to 19 years of age averaged 55 percent and reached a high of 62 percent during calendar year 1900. However, the illiteracy rate was at ten percent of the population. This included thirteen percent for foreign immigrants and over 44 percent of the African American working population. (BOC, 1975)

Changing US Manpower Needs

Prior to the enactment of both Acts, there were major changes in the economic base of the country. In the 1900's, the workforce requirements of the industrial revolution influenced the changes in public education. The United States, in 1990, has moved from that manufacturing economic base to a technology and information base economy, which has created the need for changes in the educational system.

In order to fully operate, maintain and integrate the features of complex technology-based machinery, systems and methods, today's businesses are finding that they need employees with advanced academic and occupational skills. The need for manual labor has drastically been reduced by the rapid influx of robotics, computers and other state-of-the-art technology and information systems in the workplace. In order to remain competitive in the 21st century, successful businesses need workforces where employees are capable of mastering new technology with little or no learning curve. Finding Four of the School-to-Work

Opportunities Act details that:

> The workplace in the US is changing in response to heightened international competition and new technologies, and such forces, which are ultimately beneficial to the nation, are shrinking the demand for and undermining the earning power of unskilled labor. (20 USC 6101)

The business community has developed successful technical and basic skills training programs that are beginning to emerge in the vacuum left unfilled by traditional schooling. Employers do provide short-term, job specific training for low wage workers, even though they have limited expectations for the length of time the worker will remain with their firm. Mikulecky (1988) found that basic skills are also taught in the workplace. These reading, writing and computation programs are aimed towards specialized areas. However, this on-the-job training is geared towards end-users with proficient basic skills abilities and is often 'firm' specific, which means that many of the skills acquired will not be transferable to another employer.

Improved manufacturing technology created the same effect in the workplace in the early 1900's. These increased scientific innovations transformed American workplaces rapidly. The rapid infusion of automated manufacturing processes prohibited employers from providing the fundamental skills needed by workers in their

establishments, in a timely cost efficient manner. The CNAVE found that the factories could not remain productive and profitable without the help. The CNAVE reported in 1914 that :

> The age of science and invention has brought in its wake a great body of knowledge, related to the work of the mechanic, and necessary to his highest success, which the shop can not give without the help of the schools.
>
> The workplace in the US is changing in response to heightened international competition and new technologies, and such forces, which are ultimately beneficial to the nation, are shrinking the demand for and undermining the earning power of unskilled labor. With the constantly increasing demand upon our industries for more and better goods, the supply of trained workers is, relatively at least, diminishing.
>
> In the absence of a system of education which will follow students to these tasks and, by continued training, show them a way to efficiency and happiness, the time which most of these children spend in the factory is unprofitable, both to themselves and to society. (p. 20)

The CNAVE goes on to say:

> Our products will find a market in foreign counties, only in those lines of industrial activity in which the labor is as efficient and as

> well trained as the labor of the countries with which we must compete. The battle of the future between nations will be fought in the markets of the world. (p 23)

The preceding passages from the CNAVE report of 1914 could have been written verbatim in the School-to-Work Opportunities Act of 1994. There are startling similarities between the labor conditions and the changing requirements of the workplace. Unfortunately it appears that during both periods, traditional public educational system have been ill-equipped to prepare students to meet these challenges.

Reshaping Public Education

It is apparent that public education systems have not traditionally changed quick enough to meet the manpower needs required to sustain or advance the country's economy. When confronted with this dilemma, the public response is for schools to implement programs that will address the needs. As stated earlier, both Acts were written to provide federal resources to support the development of educational systems that would remedy the manpower shortage. There are seven findings in the STWO related directly to school reform. This discussion will review them in two categories. The effects of existing educational programs is discussed first. And, the secondary educational strategies suggested to address the problem conclude the section.

Existing Education Programs and Manpower Demand

The National Center for Education Statistics (NCES, 1994) identified that nearly 88 percent of all 25- to 29-year-olds had completed high school, either in a traditional setting or through alternative programs such as night schools and programs designed to prepare for the Tests of General Educational Development (GED). From 1900 through 1970, the percentage of school age children enrolled in some form of formal education rose from 50 percent to just over 90 percent. The national high school graduation rate rose from six percent to 75 percent during the same time period. (BOC, 1975) This trend is continuing; eighty-two percent of the nation's 25-year-olds have completed four years of high school.

In the 1993-94 academic year, the NCES projected that 73 percent of all 17-year-olds would complete high school. This is constant with the completion rates over the twenty year period covering 1970-1990. However, the education requirements for the workplace are also moving upward. The median years of school for the occupations of the 21st century is expected to be 13.5 years (Workforce 2000, 1987).

This may help to explain the concerns articulated in Findings Two and Ten of the School-to-Work legislation. Finding Two of the School-to-Work Opportunities Act of 1994 indicates that "A substantial number of youths in the US, especially disadvantaged students, students of diverse racial, ethnic, and cultural backgrounds, and students with disabilities, do

not complete high school". Finding Ten provides some scope into the depth of the problem. It reads:

> In 1992, approximately 3,400,000 individuals in the US age 16-24 had not completed high school and were not currently enrolled in school, a number representing approximately 11 percent of all individuals in this age group, which indicates that these young people are particularly unprepared for the demands of a 21st century workforce. (20 USC 6101)

The ethnicity and gender proportions of the workforce is projected to change dramatically. It has been documented (Mortimer, 1990) that girls enter the workforce before boys and that they typically move more rapidly from temporary assignments into more permanent, upwardly mobile positions. The anticipated demographic composition of the workforce is depicted in Table 2.

Table 2

Labor Force Projections by Race, 1992-2005

Group	Participation Rates (percent)		
	1992	2005	% Change
White, 16 years and older	77.8%	72.9%	-4.9%
Men	42.5	38.0	-4.5
Women	35.3	34.9	-0.4
Black 16 years and older	10.8	11.0	+0.2
Men	5.3	5.4	+0.1
Women	5.4	5.6	+0.2
Hispanic 16 years and older	8.0	11.0	+0.3
Men	4.8	6.4	+1.6
Women	3.2	4.6	+1.4

Source: Bureau of Labor Statistics. (BLS, April 1994).

The anticipated demographic composition of the workforce will also include more African Americans and Hispanics in the 21st century. The percentages in Table 2 represent an additional 6.1 million African Americans and 7.8 million Hispanics over the age of sixteen entering the workforce by the year 2000. Unfortunately, these are the ethnic groups that have relatively disproportion high school completion rates.

The high school dropout rate among students 16- to 24-years-old in 1993 was 13.6 percent for African Americans and 27.5 percent for Hispanics. (NCES, 1994) These students were not enrolled in school, have not graduated from high school and have not received GED credentials. Failure to complete high school has a direct effect on employability. The

US Department of Labor (ETA, 1995) states that only half the high school dropouts with poor skills move from adolescence to employment. In their report, they cite a 1990 study which indicates that one-half of all 16- to 24-year olds high school dropouts, who were also not enrolled in some form of education program, did not have jobs.

Even though the educational opportunities exist for all American children, many, especially the disadvantaged, are not completing public education programs. The data also shows that there is a clear link between education levels and proverty. These condition may be a result of the issues outlined in Finding Five of the School-to-Work Opportunities Act of 1994 (STWO), which reads:

> The United States lacks a comprehensive and coherent system to help its youths acquire the knowledge, skills, abilities, and information about and access to the labor market necessary to make an effective transition from school to career-oriented work or further education and training. (20 USC 6101)

There are existing federally funded educational programs geared towards improving the marketability of youth entering the workforce. However, Finding Nine of the STWO indicates that although many youth do benefit from them, these programs are not connected to maximize the use of resources. Specifically, Finding Nine states "Federal resources currently fund a series of categorical, work-related education and training

programs, many of which serve disadvantage youths, that are not administered as a coherent whole".

Tech Prep, Cooperative Education, Job Training Partnerships (JTPA) and other federally funded vocational/technical education programs have been offered in school during the latter part of the century. Unfortunately, these programs are not designed to address the development of occupational skills needed by 'all' American students. Similar issues and concerns were being addressed by the CNAVE in 1914.

Given the state of the nation after the Civil War, agricultural efficiency was a primary national concern. There were federally funded programs that supported occupational training prior to 1900. There were a few existing federal and state programs designed to ensure proper secondary education and training for agriculture. The Morrill Act of 1862 granted various states tracts of land for use in preparing young men for leadership in agriculture and mechanical arts. The Nelson Act of 1890 provided for the annual grant to each state for the maintenance and for the further support of the agricultural colleges. The Morrill Act and Amendments of 1890 provided land for agricultural and mechanical arts programs. The Smith-Lever Act of 1914 provided funds for state agricultural instructional and advisory programs for farmers and extension work in agriculture and home economics. However, there were no real public secondary educational systems for them to build upon.

During this period, the compulsory school attendance age was fourteen for the majority of children in the United States. Only eleven percent of the American youth 14 to 17 years old attended high school. High schools were private; students wishing to attend them were required to pay tuition. This could only be afforded by those who planned to go to college or rich members of American society. The general public, especially minorities, did not have many of today's educational opportunities at the beginning of the century.

Formal education systems were not part of the American tapestry. By 1900, President McKinley had expanded free public school systems by providing elementary schools throughout the nation and developing public high school programs. At that time, only eleven percent of American youth 14- to 17-years-old attended high school. The CNAVE (1914) found that:

> While our schools are opened freely to every child, their aims and purposes are such that a majority of the children are unable to take advantage of them beyond a certain grade and hence do not secure at public expense a preparation for their work in life. (p. 24)
>
> Clearly the problem within our system of education is that schools should meet the needs of these children whom the present schools are not reaching effectively, and to offer courses suited to their interest and abilities. (p. 49)

> A large majority of the boys and girls in the US leave school to go to work at 14, and many of them before completing the elementary school. Because of their limited education, their entire lack of skill, and their immaturity, they are obliged to pick up odd jobs as best they can or remain about home to become idlers. They are not old enough to take up a trade nor to enter upon an apprenticeship, and in the main the doors of the more desirable skilled employment are closed to them below the age of 16. The result is that they shift about from one occupation to another, with little or no opportunity to advance in either skill or earning capacity beyond that which brings a meager subsistence. (p 48)

In the early 1900's, the majority of children went into some form of work once they had reached the compulsory school age of fourteen. These students, typically, did not find jobs in the skilled trades. The majority of young people were entering jobs that required very low or no basic skills. These jobs did not afford opportunities for better wages or promotions. The schools had not assumed responsibility for students who went on to work. Industrial organization, in the early 1900's, were no longer able or willing to train its own workers.

Census data (BOC, 1975) reveals that, in June of 1900, 62 percent of males and 24 percent of females between 14 and 19 years of age were in the labor force. The CNAVE reported that:

> Only half of the children who enter the city elementary schools of the country remain to the final elementary grade, and only one in 10 reaches the final year of high school. On the average, 10 percent of the children have left school at 13, 40 percent at 14 years of age, 70 percent by the time they are 15 and 80 percent by the time they are 16. (p. 24)

Many noted educators were critical of the traditional secondary programs that focused on providing students with academic instruction only. These scholars (Snedden, 1910; Dewey, 1915) believed that American high school programs were geared toward the ten percent of the population who planned to attend college, and that, generally, public schools neglected to address the academic and occupational needs of the majority of school-aged children. Dewey identified these children as the workers of tomorrow, those that actually make direct contribution to the everyday life of each citizen by working with his/her hands.

At the beginning of the 20th century, large numbers of people were coming to America through immigration. The US population was increasing by approximately one percent yearly. Of foreign born citizens in 1900, almost 13 percent over the age of ten were considered illiterate. (BOC, 1975) This remained constant until about the mid 1940's.

African Americans, another significant segment of the American population, were eligible to enter the educational system, at turn of the

century. The American slavery system was terminated in 1865 by the 13th Amendment to the Constitution. The 13th Amendment was the first unconditional constitutional action to terminate the institution of slavery and the first of the amendments to protect and promote the equal status of African Americans. Minority student enrollment in schools begin to increase around this period. In 1860, only two percent of African American children were receiving a formal education. This figure rose to over 31 percent in 1900. (BOC, 1975)

In 1900, there was a tremendous desire among the immigrant and minority populations to educate themselves and their children. However, the Commission's report (CNAVE, 1914) indicates that although education was valued, acquiring the necessities of life prevailed in most households:

> Whether from necessity or not, the economic fact is that the mass of children go to work as soon as the laws of various States permit. It is not solely because the children and their parents do not appreciate the value of an education that more than half of the entire number who enter the elementary school do not remain to complete it. (pg. 24)

In 1900, children over the age of fourteen could work full-time. This did not change until the Fair Labor Standards Act of 1938 (FLSA). This law specifically states that:

> Youths under 14 may work only if their jobs are exempt from the child labor standards or not covered by the FLSA. Exempt work includes: delivery of newspapers to consumers; performing in theatrical, motion picture, or broadcast productions; and work in a business owned by parents of the minor, except in manufacturing or hazardous occupations.

This federal mandated legislative help lead the way to a better educated America.

As recently as 1994, The National Center for Education Statistics reports that 95 percent of five and six year old students were enrolled in elementary school. Almost 100 percent of 7- to 13-year-old students and over 96 percent of 14- to 17-year-old students were enrolled in a formal educational program. This is a dramatic change since the beginning of the 20th century. However, these efforts have not prepared students to enter the workplace. The School-to-Work Opportunities Act of 1994 makes an effort at helping define how instructional delivery systems can be modified to properly prepare young people.

Educational Strategies Suggested

The workplace has changed drastically during the 20th century. Unfortunately, secondary programs remain virtually the same. Secondary schools have not kept abreast nor implemented programs that support activities transpiring in the workplace. Finding Six of the School-

to-Work Opportunities Act of 1994 supports that American students have demonstrated to ability to learn. The finding states that "Students in the United States can achieve high academic and occupational standards, and many learn better and retain more when the students learn in context, rather than in the abstract". However, Finding Eight indicates that a more reality-based learning strategy needs to be promptly instituted. Finding Eight reads:

> The work-based learning approach, which is modeled after the time-honored apprenticeship concept, integrates theoretical instruction with structured on-the-job training, and this approach, combined with school-based learning, can be very effective in engaging student interest, enhancing skill acquisition, developing positive work attitudes, and preparing youth for high-skill, high-wage careers. (20 USC 6101)

In the 1990's, standardized test scores are not increasing and students do not have the foundations needed to support complex higher level thinking skills. This is substantiated in Holmes' (1983) report detailing changes in student performance. She indicates that overall performance in mathematics and science are declining. However, African American students are experience more gains than white students in reading and mathematics.

Even though their skills are less than industry desires, these students are very willing to work. Parents are also very supportive of their working children. (Phillips, Sandstrom, 1990) Its unfortunate, however, that most often there is not link between their jobs and what they are learning in school. Finding seven of the STWO states that "While many students in the United States have part-time jobs, there is infrequent linkage between (a) such jobs; and (b) the career planning or exploration, or the school-based learning of such students".

The STWO outlines, in one of its fourteen purpose statements, the intent to improve the knowledge and skills by developing instructional strategies that incorporate the integration of academic and occupational concepts. This philosophy does not differ from the principles used to formulate the Smith Hughes Act of 1917.

In 1914, the CNAVE had the same concept of vocational education programs. The commission felt that:

> Vocational training will indirectly but positively affect the aims and methods of general education by: (1) Developing a better teaching process through which the children who do not respond to book instruction alone may be reached and educated through learning by doing. (2) Introducing into our educational system the aim of utility, to take its place in dignity by the side of culture and to connect education with life by making it purposeful and useful. (p. 12)

> It is an established principle that trade and industrial education can not be given successfully by theoretical study alone, but must be accompanied by shop practice on a useful or productive basis or as nearly as may be on such a basis. The consensus of opinion is that at least half the time of pupils should be given to shop practice and that such instruction should extend over a sufficiently period to give the amount of continuous practice necessary. (p. 75)

As discussed earlier, there were many influences that precluded students at the beginning of the century from pursuing and/or completing secondary educational programs. The CNAVE felt that:

> The mission of vocational education is not only to provide definite training in the technique of the various occupations, but to relate that training closely to the science, mathematics, history, geography, and literature which are useful to the man and woman as a worker and a citizen. Under such instruction, the student worker becomes familiar with the laws of health and with his rights and obligations as a worker and a citizen in relation to his employer, his fellow employees, his family, the community, the State, and the Nation. By thus relating education closely the world's experience it becomes purposeful and useful and enables the worker to see the significance

> of, the use, and to interpret in terms of his own experience, the knowledge and culture which the race has accumulated. (p 25)
>
> The theory and established practice of American education is that the school time of children up to 14 years of age should be given to the acquirement of a general education, upon which any special training must be based. This does not mean that general education may not have strong vocational elements in it... (p. 46)

The commissioners wanted to create educational programs that gave students an opportunity to gain skills and knowledge through activities supported by experiential learning concepts. Even though they strongly supported this premise, their greatest fear was that a split would be created between academic and vocational education and to this day the two are still separate entities instead of a collaborative effort.

Conclusions and Recommendations

This study sought to identify the similarities and differences in the findings leading up to the enactment of two significant pieces of education legislation: The Smith Hughes Act of 1917 and the School-to-Work Opportunities Act of 1994. After a meticulous review of historical and current demographic, employment and education data, it is concluded that there are significant similarities in the findings. Specifically, the major similarities are that:

1. Existing educational systems were not adequately preparing youth for the workplace. Thereby, precluding them from advancing into occupations that would provide opportunities for challenge and professional growth.
2. Technological changes in the workplace dictated the need for modifications and enhancement to secondary educational systems.
3. There was no relationship between what is taught in schools and what is needed in the workplace.
4. The United States economy will only continue to grow and remain competitive, if immediate attention is directed at changing public educational systems.

The significant difference between the variables leading up to both Acts is the structure of secondary schools, at the time of enactment. In the early 1900's, there were few secondary programs in place. This provided little, if any, foundation on which to build. However, the condition did afford educators the opportunity of designing educational secondary systems that could address the problems.

In the latter part of the 20th century, the reverse condition exists. There are public educational systems throughout the country. All American children are required to attend school through the age of 16. Unfortunately, the majority of schools are built upon the premise of

preparing youth for post-secondary academic careers. Therefore, the specific skills needed in the workplace are often overlooked and ignored.

The nation's early goal of providing secondary educational opportunities for all American children has been realized during the 20th century. As the data reflects, more children are attending and successfully completing elementary school. Student retention rates in public school systems have steadily increase during the past 100 years. Given time, it also appears that most adults will eventually complete either a high school alternative education program or successfully complete the GED.

There still remains great concern regarding the possible under-education of American minority groups. During the latter part of the century, much attention has been focused on understanding why minority students did not fair as well as white students in schools.

Strong educational foundations do have a positive effect on the successfulness of youth in the workplace. Unfortunately, many graduates will not possess the entry-level skills needed to be productive in the workplaces in the 21st century. If the School-to-Work Opportunities Act of 1994 is to make a difference in how youth are prepared for the workplace, the following issues need to be resolved. These issues include:

1. Developing national strategies for changing the American cultural philosophy that a college education is required for success in the workplace.

2. Designing student performance outcomes in such a way that encourage the integration of academics and occupational strategies within each content area taught.
3. Creating systems that ensure all children have access to equal educational opportunities, such as work-based learning, regardless of their gender, disabilities, economic and ethnic backgrounds.

These three issues are simply stated, however, they represent major obstacles on the road to full implementation of the systems outlined in the School-to-Work Opportunities Act of 1994. If they are not resolved, there is nothing that will stop America for remaining in the same place for another 100 years.

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